(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

Organization
International Bureau

OMP





(43) International Publication Date 18 November 2004 (18.11.2004)

PCT

(10) International Publication Number WO 2004/100411 A1

(51) International Patent Classification7:

H04J 3/06

(21) International Application Number:

PCT/IB2004/050511

(22) International Filing Date: 26 April 2004 (26.04.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 03101255.2

6 May 2003 (06.05.2003) EP

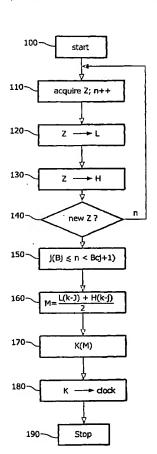
- (71) Applicant (for DE only): PHILIPS INTELLECTUAL PROPERTY & STANDARDS GMBH [DE/DE]; Steindamm 94, 20099 Hamburg (DE).
- (71) Applicant (for all designated States except DE, US):
 KONINKLIJKE PHILIPS ELECTRONICS N.V.
 [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven
 (NL).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): UNGERMANN, Jörn [DE/DE]; c/o Philips Intellectual Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE). FUHRMANN, Peter [DE/DE]; c/o Philips Intellectual Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE). ZINKE, Manfred [DE/DE]; c/o Philips Intellectual Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE).
- (74) Agent: VOLMER, Georg; Philips Intellectual Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,

[Continued on next page]

(54) Title: METHOD FOR TEMPORAL SYNCHRONIZATION OF CLOCKS



(57) Abstract: In order to carry out in a communication system (1) a temporal synchronization of clocks in a particularly rapid and efficient manner, a method is proposed which has the following steps: acquiring state values which are dependent on a time base (10); filing each acquired state value at a position in a first list L comprising (k+l) positions, if the acquired state value is smaller than or equal to the (k+1) smallest element of the list L, where k is a predefinable error tolerance; filing the acquired state value at a position in a second list H comprising (k+l) positions, if the acquired state value is greater than or equal to the (k+1) greatest element of the list H; forming a mean value from the (k+1) smallest element of the list L and the (k+l) greatest element of the list H, if the number of acquired state values is greater than or equal to (2k+2); determining a correction value as a function of the mean value; and correcting a current state value of the clocks that are to be synchronized.



WO 2004/100411 A1



PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.